

## **REMARKS**

### **I. Introduction**

With the cancellation herein without prejudice of claims 3 to 5, claims 1 and 6 to 25 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that the present application is in condition for allowance, and reconsideration is respectfully requested.

### **II. Rejection of Claims 3 to 5 and 7 to 10 Under 35 U.S.C. § 112, First Paragraph**

Claims 3 to 5 and 7 to 10 were rejected under 35 U.S.C. 112, first paragraph as allegedly failing to comply with the enablement requirement. It is respectfully submitted that the present rejection should be withdrawn for at least the following reasons.

As an initial matter, claims 3 to 5 have been canceled herein without prejudice, thereby rendering moot the present rejection with regard to claims 3 to 5.

The Office Action alleges at page 3 that “[t]he specification does not provide any description as to how the actuator layer is deformable as a function of an electrical field, electromagnetic field or optical signal, e.g., light.” Applicant respectfully disagrees. The Specification describes, for example, actuation layer materials that have a volume that is controllable by an electrical field and/or light. Page 6, lines 3 to 33. As such, it is respectfully submitted that the Specification provides adequate support under 35 U.S.C. § 112, first paragraph for claims 7 to 10. Accordingly, withdrawal of this rejection is respectfully requested.

### **III. Rejection of Claims 1, 3 to 13, and 15 to 25 Under 35 U.S.C. § 103(a)**

Claims 1, 3 to 13, and 15 to 25 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 6,373,472 (“Palalau et al.”) and U.S. Patent Application Publication No. 2003/0179190 (“Franzen”). It is respectfully submitted that the combination of Palalau et al. and Franzen does not render unpatentable the present claims for at least the following reasons.

As an initial matter, Applicant again respectfully notes that U.S. Patent Application Publication No. 2003/0179190 **does not constitute prior art** against the present application. In this regard, U.S. Patent Application Publication No.

2003/0179190 was published on **September 25, 2003** from U.S. Patent Application Serial No. 10/380,928, which is stated on the face of U.S. Patent Application Publication No. 2003/0179190 to be the **national stage of PCT International Patent Application No. PCT/DE01/03402**, filed on **September 5, 2001**. PCT International Patent Application No. PCT/DE01/03402 was **published in German** as WO 02/27645. Since PCT International Patent Application No. PCT/DE01/03402 was **filed after November 29, 2000** and was **not published in English**, U.S. Patent Application Publication No. 2003/0179190 only qualifies as prior art **as of its publication or grant date, not its U.S. filing date**. See, e.g., MPEP § 706.02(f)(1) ("If the international application was filed on or after November 29, 2000, but did **not** designate the United States or was **not** published in English under PCT Article 21(2), do **not** treat the international filing date as a U.S. filing date for prior art purposes. In this situation, do **not** apply the reference as of its international filing date, its date of completion of the 35 U.S.C. 371(c)(1), (2) and (4) requirements, or any earlier filing date to which such an international application claims benefit or priority." (emphasis in original)). The Examiner's attention is also respectfully directed to the flowchart appearing at M.P.E.P. § 706.02(f)(1)(III), page 700-40. Because U.S. Patent Application Publication No. 2003/0179190 was published **after** the filing date of the present application, it does not constitute prior art against the present application. Since the present rejection relies in part on U.S. Patent Application Publication No. 2003/0179190, withdrawal of this rejection is respectfully requested.

As another initial matter, claims 3 to 5 have been canceled herein without prejudice, thereby rendering moot the present rejection with respect to claims 3 to 5.

Notwithstanding the foregoing, to facilitate prosecution, claim 1 has been amended herein without prejudice to recite that **the actuator layer has a material having a reversibly and controllably changeable volume**. Support for this amendment may be found, for example, at page 6, lines 21 to 33 of the Specification. In addition, claims 20 to 22 have been amended herein without prejudice in analogous manner. Palalau et al. and Franzen, alone or in combination, do not disclose, or even suggest, an actuator layer having a material having a reversibly and controllably changeable volume.

As indicated above, the combination of Palalau et al. and Franzen does not disclose, or even suggest, all of the features recited in any of claims 1 and 20 to

22. As such, it is respectfully submitted that the combination of Palalau et al. and Franzen does not render unpatentable any of claims 1 and 20 to 22.

As for claims 6 to 13, 15 to 19 and 23 to 25, which ultimately depend from claim 1 and therefore include all of the features recited in claim 1, it is respectfully submitted that the combination of Palalau et al. and Franzen does not render unpatentable these dependent claims for at least the same reasons more fully set forth above in support of the patentability of claim 1.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

#### **IV. Rejection of Claim 14 Under 35 U.S.C. § 103(a)**

Claim 14 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Palalau et al., Franzen, and U.S. Patent Application Publication No. 2004/0017362 ("Mulligan et al."). It is respectfully submitted that the combination of Palalau et al., Franzen, and Mulligan et al. does not render unpatentable claim 14 for at least the following reasons.

As an initial matter, and as set forth above, U.S. Patent Application Publication No. 2003/0179190 does not constitute prior art against the present application under 35 U.S.C. § 102. Since the present rejection relies in part on U.S. Patent Application Publication No. 2003/0179190, withdrawal of this rejection is respectfully requested.

Notwithstanding the foregoing, it is respectfully submitted that the present rejections should be withdrawn for at least the following additional reasons.

Claim 14 depends from claim 1 and therefore includes all of the features recited in claim 1. As more fully set forth above, Palalau et al. and Franzen, alone or in combination, do not disclose or suggest all of the features recited in claim 1. Mulligan et al. do not disclose or suggest the features of claim 1 not disclosed or suggested by the combination of Palalau et al. and Franzen. In this regard, it is noted that Franzen does not disclose or suggest an actuation layer.

In view of the foregoing, it is respectfully submitted that the combination of Palalau et al., Franzen, and Mulligan et al. does not disclose, or even suggest, all of the features of claim 14. As such, it is respectfully submitted that the combination of Palalau et al., Franzen, and Mulligan et al. does not render unpatentable claim 14.

In view of all of the foregoing, withdrawal of this rejection is respectfully submitted.

**V. Conclusion**

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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